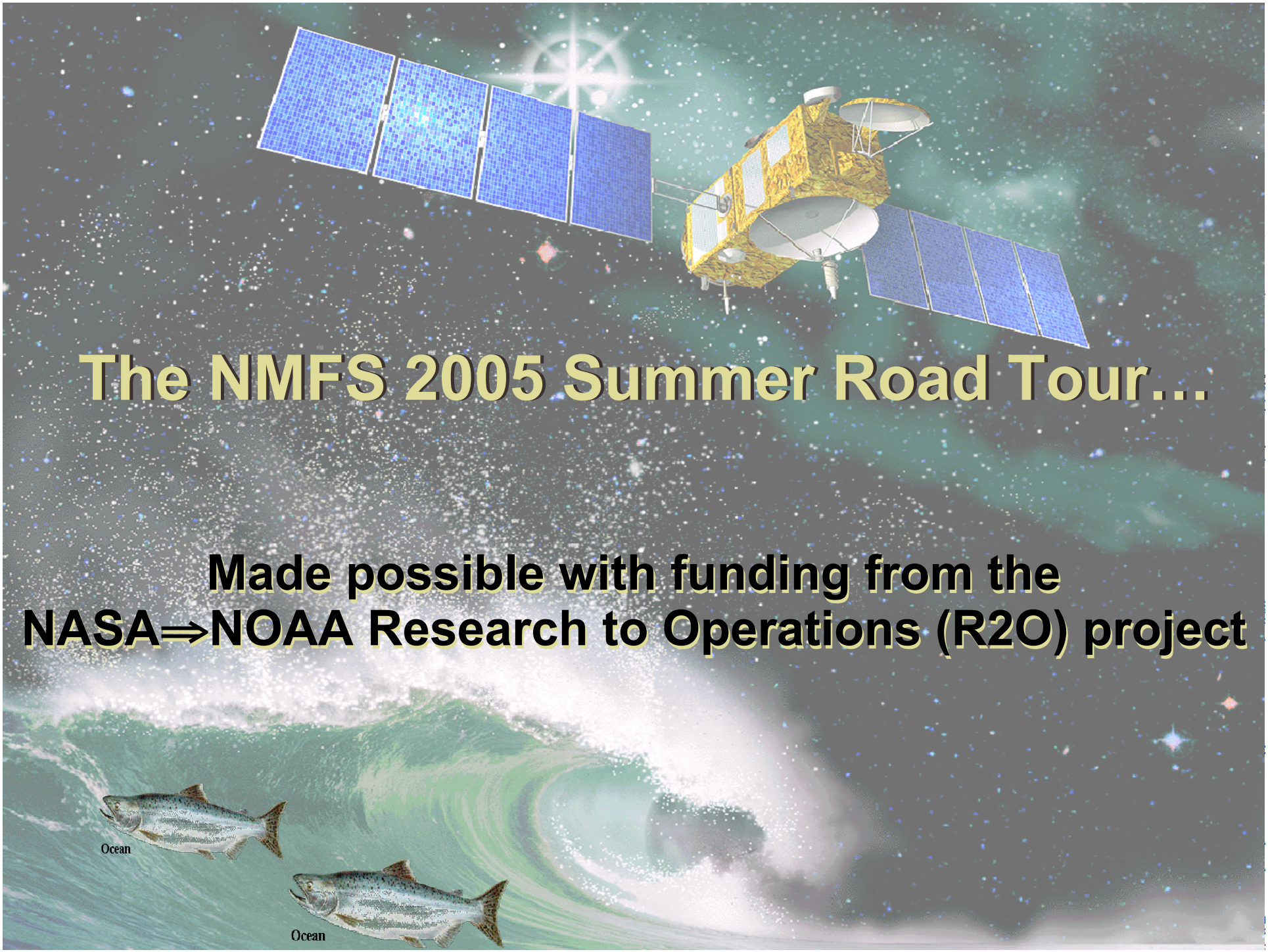
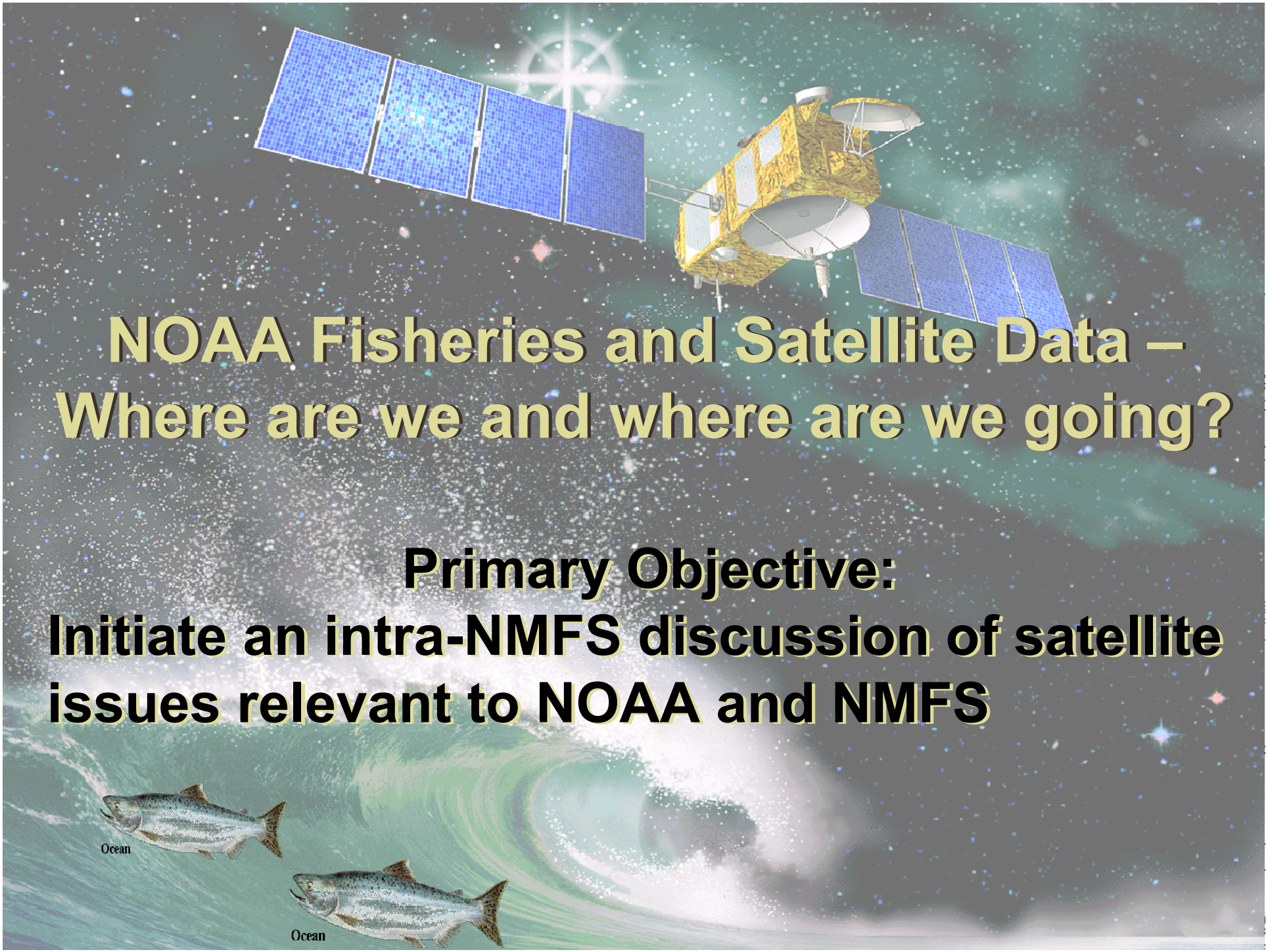

The NMFS 2005 Summer Road Tour…
Made possible with funding from the
NASA⇒NOAA Research to Operations (R2O) project
Ocean
Ocean


NOAA Fisheries and Satellite Data –
Where are we and where are we going?
Primary Objective:
Initiate an intra-NMFS discussion of satellite issues relevant to NOAA and NMFS
Ocean
Ocean

NMFS-Satellite group

- **Satellite POCs for each science center (appointed by lab director)**

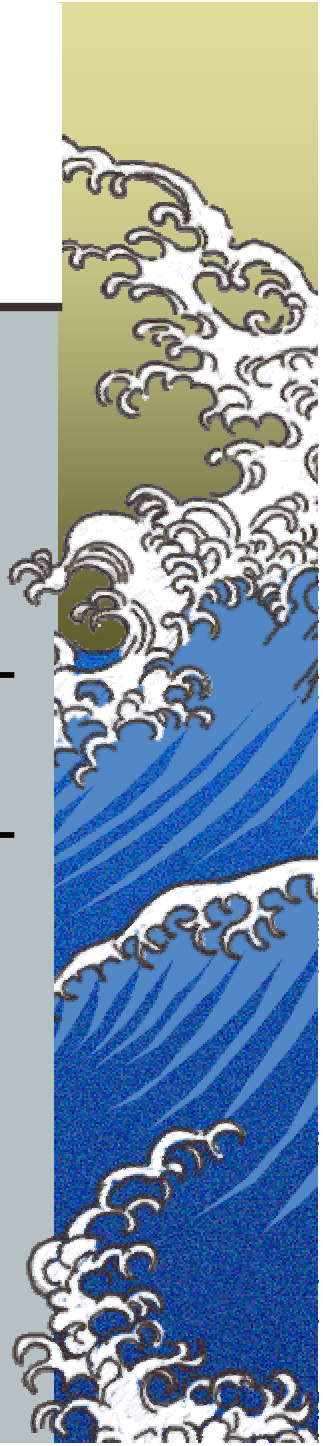
AFSC	**Jeff Napp (Seattle)**
NEFSC	**Jay O'Reilly (Narragansett)**
NWFSC	**Bill Peterson (Newport)**
PIFSC	**Jeff Polovina (Honolulu)**
SEFSC	**Tom Leming (Mississippi)**
SWFSC	**Cara Wilson (Pacific Grove)**

POC also a CoastWatch PI
Labs outside of the regional HQ

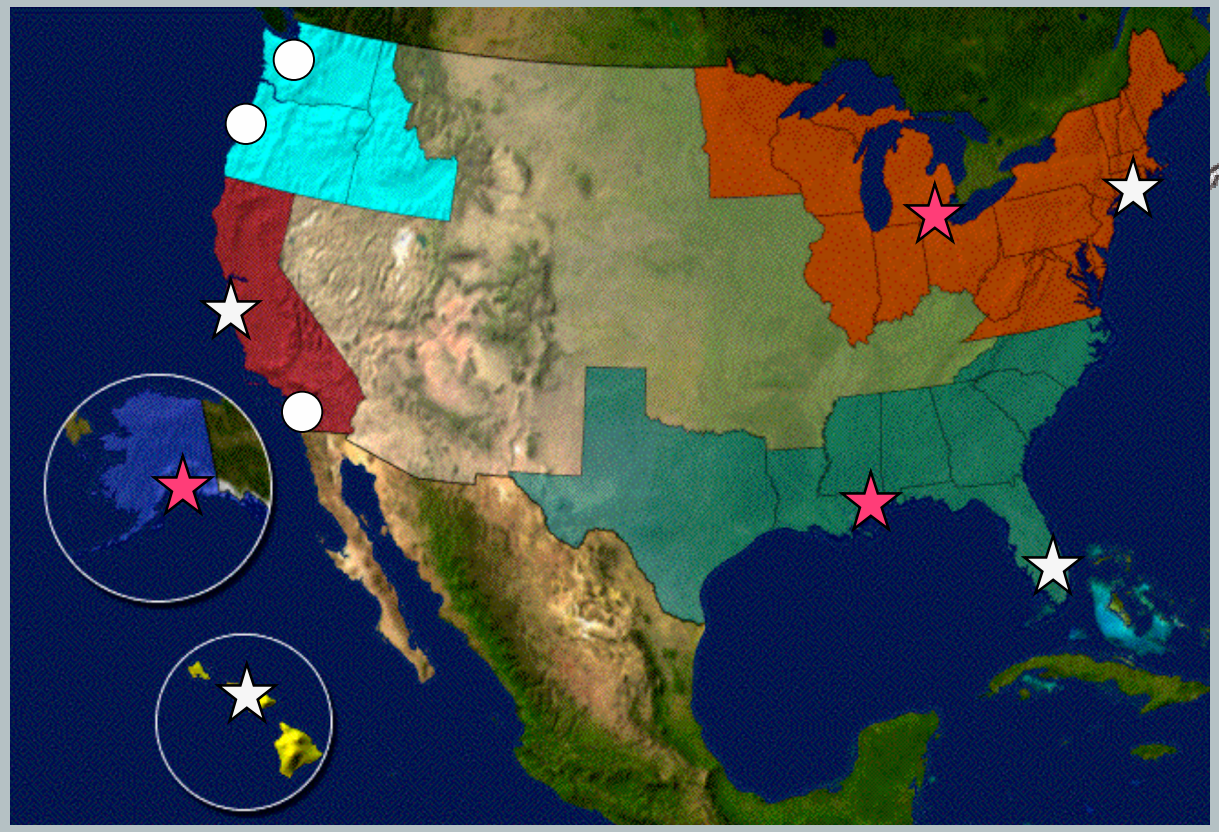
The NMFS Road Tour Schedule

- Talk and visit at:

AFSC	Seattle	June 7, 2005
NEFSC	Narragansett	Aug 3, 2005
~~NEFSC~~	~~Woods Hole~~	~~Aug 3, 2005~~
NWFSC	Newport	Aug 16, 2005
~~NWFSC~~	~~Seattle~~	~~June 8, 2005~~
PIFSC	Honolulu	July 18, 2005
SEFSC	Miami	July 26, 2005
SWFSC	La Jolla	June 15, 2005



NMFS Regions & CW nodes



- Northwest
- Southwest
- Alaska
- Northeast
- Southeast
- Pacific

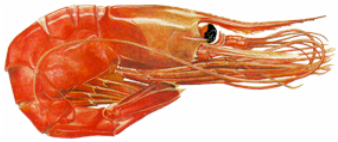
- ☆ CoastWatch node (visited)
- ★ CoastWatch node (not visited)
- ○ NMFS lab visited (without a local CoastWatch node)

Participation

	Total	SDU*	SA*
AFSC, Seattle	~20	?	?
SWFSC, La Jolla	~30	6	~2
PIFSC, Honolulu	~25	4	3
SEFSC, Miami	~15	5	0
NEFSC, Narragansett	~12	6	1
NWFSC, Newport	~35	5	1

*SDU - Satellite Data Users
*SA - Involved with Stock Assessment

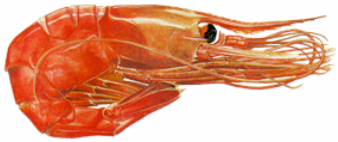
Interest



	Total	one-on-one talks*
AFSC, Seattle	~20	2 (both non-NMFS: PMEL)
SWFSC, La Jolla	~30	2
PIFSC, Honolulu	~25	0
SEFSC, Miami	~15	5 (2 non-NMFS: AOML)
NEFSC, Narragansett	~12	11
NWFSC, Newport	~30	3

* Aside from discussions with local host

Interest



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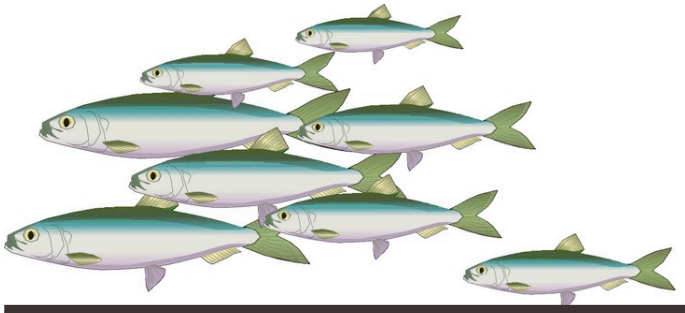


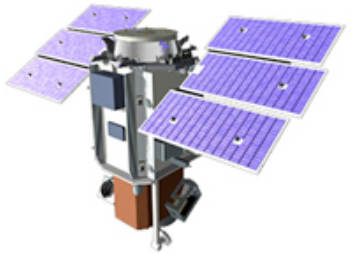
Gap Analysis

NMFS's primary responsibility, stock assessment, has remained largely outside of these discussions.


Feedback
Ocean
Ocean

Sea Ice

- Where does Sealce data fit in?
- Is it's continuity assured?
- Of critical use at AFSC and SWFSC (Antarctic Research Division).



VMS Data

- There is definite interest within NMFS in utilizing VMS (Vessel Monitoring System) data from OLE (Office of Law Enforcement) to track movements of stock populations, but this data is difficult if not impossible to access.

Data Access Issues

- **Limited enthusiasm for future satellite data at higher spatial and temporal resolutions: “we can’t deal with the amount of data currently available”**
- **Ease of data availability is crucial!! A strong desire for data in GIS format.**

Better Resolution with GOES-R…

A direct quote responding to the question of what benefits would be expected from the resolution of data from the GOES-R HES-CW:

"Better resolution increases storage constraints, so while better resolution would be useful for select areas where intensive high research is underway, *a global high res dataset would require a great deal more resources to manage…and I am not sure how useful this would be to marine researchers.* "

Meaning ?!?!…..

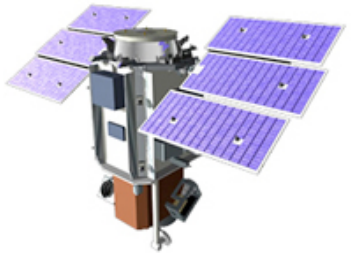
Better Resolution with GOES-R…

Meaning –

We are currently doing an inadequate job of suppling user-friendly means of:

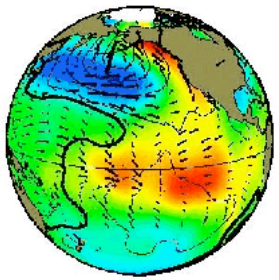
ACCESS,
MANIPULATION, and
DELIVERY of satellite data

To maximize the utility (and use in an 'operational' sense) of satellite data in cross-cutting applications we need to have an efficient system for users to access, manipulate and obtain the satellite data (both real-time and science-quality climate data records).



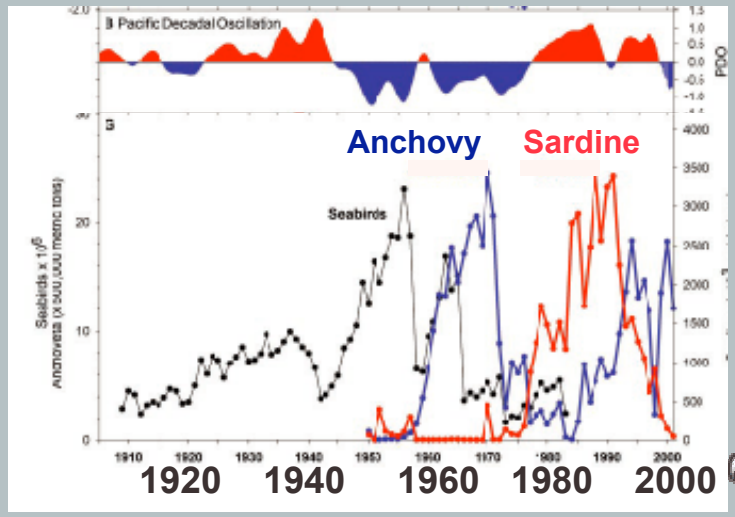
Satellite Telemetry

- Is it possible to have a dedicated channel of NOAA's polar orbiting satellites that could transmit environmental data from pop-up satellite archival tags (pSAT)?
- ARGOS system is not designed to transmit the amount of data recorded on pSATs. Currently only about 5% of the data recorded is actually transmitted, meaning 95% of the environnmental data recorded in them is lost.
- This data is vital to understanding stocks as it is:
  - fishery dependent
  - provides information about the subsurface habitat

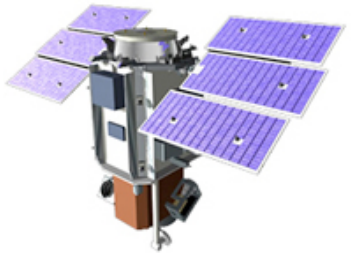


Time Series

- **Many scientists within NMFS have datasets spanning many decades, and there is significant decadal variability affecting different fish populations.**
- **Subsequently it can be difficult to impress fisheries scientists of the benefits of using satellite data when their time spans are relatively short.**
- **It's essential that climate quality data of satellite data be maintained!**

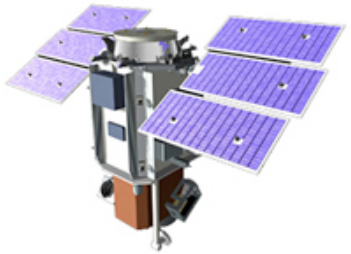


Chavez et al. [Science, 2003]



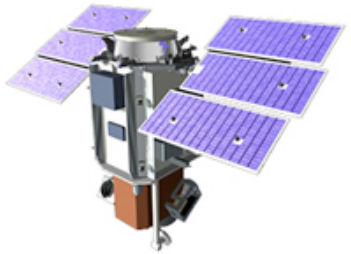
Resources

- A lot of potential applications of satellite data to fisheries requires directed work. Not enough to just point fisheries scientists to the data. The most fruitful developments come out of collaborations between satellite-oriented scientists and fisheries-oriented scientists.



Infrastructure

- **Many fisheries scientists do not have the computational power to hold and process large volumes of satellite data. Data delivery systems need to take this into account, and allow for flexible subsetting, both regionally and temporally.**
- **Bandwidth power is a serious issue at some labs. One scientist using satellite data *downloads the data at home using a personal DSL line because their NOAA network at work is insufficient.***



Products

- Sea Ice
- Primary Productivity
- Frontal products
- Subsurface parameters